AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A vinyl ether group-containing (meth) acrylic ester composition

which comprises a radical polymerization inhibitor and a vinyl ether group-containing (meth) acrylic ester represented by the following general formula (1):

$CH_2=CR^1\text{-}COO\text{-}R^2\text{-}O\text{-}CH=CH\text{-}R^3$ (1)

~~CH2=CR1-COO-R2-O-CH=CH-R3 (1)~~

in the formula, R^1 ~~R1~~ represents a hydrogen atom or a methyl group, ~~R2 represents an organic residue~~ R^2 represents a straight, branched or cyclic alkylene group containing 2 to 20 carbon atoms, an alkylene group containing 2 to 20 carbon atoms and having at least one oxygen atom in the form of an ether linkage and/or an ester linkage within the structure thereof, or an aromatic group which contains 6 to 11 carbon atoms and may optionally be substituted, and ~~R3 represents a hydrogen atom or an organic residue~~ R^3 represents a hydrogen atom , a straight, branched or cyclic alkyl group containing 1 to 10 carbon atoms, or an aromatic group which contains 6 to 11 carbon atoms and may optionally be substituted.

2. (currently amended): A vinyl ether group-containing (meth) acrylic ester composition as in claim 1,

which comprises a radical polymerizaton inhibitor, a basic compound and a vinyl ether group-containing (meth) acrylic ester represented by the following general formula (1):

$CH_2=CR^1-COO-R^2-O-CH=CH-R^3$ (1)

~~CH2=CR1-COO-R2-O-CH=CH-R3 (1)~~

in the formula, R^1 ~~R1~~ represents a hydrogen atom or a methyl group, ~~R2 represents an organic residue~~ R^2 represents a straight, branched or cyclic alkylene group containing 2 to 20 carbon atoms, an alkylene group containing 2 to 20 carbon atoms and having at least one oxygen atom in the form of an ether linkage and/or an ester linkage within the structure thereof, or an aromatic group which contains 6 to 11 carbon atoms and may optionally be substituted, and ~~R3 represents a hydrogen atom or an organic residue~~ R^3 represents a hydrogen atom , a straight, branched or cyclic alkyl group containing 1 to 10 carbon atoms, or an aromatic group which contains 6 to 11 carbon atoms and may optionally be substituted.

A1 cont'd

3. (currently amended): A method of producing the vinyl ether group-containing (meth) acrylic ester composition according to Claim 1,

which comprises causing a radical polymerization inhibitor, or both of a radical polymerization inhibitor and a basic compound to coexist with a vinyl ether group-containing (meth) acrylic ester represented by the following general formula (1):

$CH_2=CR^1-COO-R^2-O-CH=CH-R^3$ (1)

~~CH2=CR1-COO-R2-O-CH=CH-R3 (1)~~

in the formula, R^1 ~~R1~~ represents a hydrogen atom or a methyl group, ~~R2 represents an organic residue~~ R^2 represents a straight, branched or cyclic alkylene group containing 2 to 20 carbon

atoms, an alkylene group containing 2 to 20 carbon atoms and having at least one oxygen atom in the form of an ether linkage and/or an ester linkage within the structure thereof, or an aromatic group which contains 6 to 11 carbon atoms and may optionally be substituted, and ~~R3 represents a hydrogen atom or an organic residue~~ R^3 represents a hydrogen atom , a straight, branched or cyclic alkyl group containing 1 to 10 carbon atoms, or an aromatic group which contains 6 to 11 carbon atoms and may optionally be substituted.

4. (currently amended): A method of handling a vinyl ether group-containing (meth) acrylic ester

which comprises handling said vinyl ether group-containing (meth) acrylic ester under the condition such that a water concentration in a liquid phase containing a vinyl ether group-containing (meth) acrylic ester is not more than 15% by weight and said vinyl ether group-containing (meth) acrylic ester being represented by the following general formula (1):

$CH_2=CR^1-COO-R^2-O-CH=CH-R^3$ (1)

~~CH2=CR1-COO-R2-O-CH=CH-R3 (1)~~

in the formula, R^1 ~~R1~~ represents a hydrogen atom or a methyl group, ~~R2 represents an organic residue~~ R^2 represents a straight, branched or cyclic alkylene group containing 2 to 20 carbon atoms, an alkylene group containing 2 to 20 carbon atoms and having at least one oxygen atom in the form of an ether linkage and/or an ester linkage within the structure thereof, or an aromatic group which contains 6 to 11 carbon atoms and may optionally be substituted, and ~~R3 represents a hydrogen atom or an organic residue~~ R^3 represents a hydrogen atom, a straight, branched or

cyclic alkyl group containing 1 to 10 carbon atoms, or an aromatic group which contains 6 to 11 carbon atoms and may optionally be substituted.

5. (currently amended): A method handling a vinyl ether group-containing (meth) acrylic ester

which comprises handling said vinyl ether group-containing (meth) acrylic ester under the condition such that a molecular oxygen concentration in the gaseous phase in contact with a vinyl ether group-containing (meth) acrylic ester is 0.01 to 15% by volume and

said vinyl ether group-containing (meth) acrylic ester being represented by the following general formula (1):

$CH_2=CR^1-COO-R^2-O-CH=CH-R^3$ (1)

~~CH2=CR1-COO-R2-O-CH=CH-R3~~ ~~(1)~~

in the formula, R^1 ~~R1~~ represents a hydrogen atom or a methyl group, ~~R2 represents an organic residue~~ R^2 represents a straight, branched or cyclic alkylene group containing 2 to 20 carbon atoms, an alkylene group containing 2 to 20 carbon atoms and having at least one oxygen atom in the form of an ether linkage and/or an ester linkage within the structure thereof, or an aromatic group which contains 6 to 11 carbon atoms and may optionally be substituted, and ~~R3 represents a hydrogen atom or an organic residue~~ R^3 represents a hydrogen atom, a straight, branched or cyclic alkyl group containing 1 to 10 carbon atoms, or an aromatic group which contains 6 to 11 carbon atoms and may optionally be substituted.

6. (currently amended): A method of handling a vinyl ether group-containing (meth) acrylic ester

which comprises handling said vinyl ether group-containing (meth) acrylic ester in a lightproof structure and

said vinyl ether group-containing (meth) acrylic ester being represented by the following general formula (1):

$CH_2=CR^1\text{-}COO\text{-}R^2\text{-}O\text{-}CH=CH\text{-}R^3$ (1)

~~CH2=CR1-COO-R2-O-CH=CH-R3 (1)~~

in the formula, R^1 ~~R1~~ represents a hydrogen atom or a methyl group, ~~R2 represents an organic residue~~ R^2 represents a straight, branched or cyclic alkylene group containing 2 to 20 carbon atoms, an alkylene group containing 2 to 20 carbon atoms and having at least one oxygen atom in the form of an ether linkage and/or an ester linkage within the structure thereof, or an aromatic group which contains 6 to 11 carbon atoms and may optionally be substituted, and ~~R3 represents a hydrogen atom or an organic residue~~ R^3 represents a hydrogen atom , a straight, branched or cyclic alkyl group containing 1 to 10 carbon atoms, or an aromatic group which contains 6 to 11 carbon atoms and may optionally be substituted.

A1 cont'd

7. (currently amended): A method of handling a vinyl ether group-containing (meth) acrylic ester

which comprises handling said vinyl ether group-containing (meth) acrylic ester in a lightproof structure while keeping a molecular oxygen concentration in the gaseous phase within said lightproof structure at 0.01 to 22% by volume and

said vinyl ether group-containing (meth) acrylic ester being represented by the following general formula (1):

$CH_2=CR^1-COO-R^2-O-CH=CH-R^3$ (1)

~~CH2=CR1-COO-R2-O-CH=CH-R3 (1)~~

in the formula, R^1 ~~R1~~ represents a hydrogen atom or a methyl group, ~~R2 represents an organic residue~~ R^2 represents a straight, branched or cyclic alkylene group containing 2 to 20 carbon atoms, an alkylene group containing 2 to 20 carbon atoms and having at least one oxygen atom in the form of an ether linkage and/or an ester linkage within the structure thereof, or an aromatic group which contains 6 to 11 carbon atoms and may optionally be substituted, and ~~R3 represents a hydrogen atom or an organic residue~~ R^3 represents a hydrogen atom, a straight, branched or cyclic alkyl group containing 1 to 10 carbon atoms, or an aromatic group which contains 6 to 11 carbon atoms and may optionally be substituted.

A1 cont'd

8. (currently amended): A method of producing a vinyl ether group-containing (meth) acrylic ester represented by the following general formula (1):

$CH_2=CR^1-COO-R^2-O-CH=CH-R^3$ (1)

~~CH2=CR1-COO-R2-O-CH=CH-R3 (1)~~

in the formula, R^1 ~~R1~~ represents a hydrogen atom or a methyl group, ~~R2 represents an organic residue~~ R^2 represents a straight, branched or cyclic alkylene group containing 2 to 20 carbon atoms, an alkylene group containing 2 to 20 carbon atoms and having at least one oxygen atom in the form of an ether linkage and/or an ester linkage within the structure thereof, or an aromatic group which contains 6 to 11 carbon atoms and may optionally be substituted, and ~~R3 represents~~

~~a hydrogen atom or an organic residue~~ R^3 represents a hydrogen atom, a straight, branched or cyclic alkyl group containing 1 to 10 carbon atoms, or an aromatic group which contains 6 to 11 carbon atoms and may optionally be substituted,

which comprises reacting a hydroxyl group-containing vinyl ether represented by the following general formula (2):

R^3-CH=CH-O-R^2-OH (2)

~~R3-CH=CH-O-R2-OH (2)~~

in the formula, ~~R2 represents an organic residue~~ R^2 represents a straight, branched or cyclic alkylene group containing 2 to 20 carbon atoms, an alkylene group containing 2 to 20 carbon atoms and having at least one oxygen atom in the form of an ether linkage and/or an ester linkage within the structure thereof, or an aromatic group which contains 6 to 11 carbon atoms and may optionally be substituted, and ~~R3 represents a hydrogen atom or an organic residue~~ R^3 represents a hydrogen atom, a straight, branched or cyclic alkyl group containing 1 to 10 carbon atoms, or an aromatic group which contains 6 to 11 carbon atoms and may optionally be substituted,

A1 cont'd

with a (meth) acrylic ester represented by the following general formula (3):

CH_2=CR^1-COOR^4 (3)

~~CH2=CR1-COOR4 (3)~~

in the formula, R^1 ~~R1~~ represents a hydrogen atom or a methyl group and R^4 ~~R4~~ represents an organic residue, and

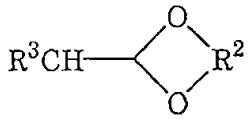
said hydroxyl group-containing vinyl ether containing at least one compound selected from the group consisting of a divinyl ether represented by the following general formula (4):

R^3-CH=CH-O-R^2-O-CH=CH-R^3 (4)

~~R3-CH=CH-O-R2-O-CH=CH-R3 (4)~~

in the formula, ~~R2 represents an organic residue~~ R^2 represents a straight, branched or cyclic alkylene group containing 2 to 20 carbon atoms, an alkylene group containing 2 to 20 carbon atoms and having at least one oxygen atom in the form of an ether linkage and/or an ester linkage within the structure thereof, or an aromatic group which contains 6 to 11 carbon atoms and may optionally be substituted, and the two R^3 ~~R3~~ groups are the same or different and each represents a hydrogen atom ~~or an organic residue~~, a straight, branched or cyclic alkyl group containing 1 to 10 carbon atoms, or an aromatic group which contains 6 to 11 carbon atoms and may optionally be substituted,

a 2-substituted-1, 3-dioxo compound represented by the following general formula (5):



(5)

in the formula, ~~R2 represents an organic residue~~ R^2 represents a straight, branched or cyclic alkylene group containing 2 to 20 carbon atoms, an alkylene group containing 2 to 20 carbon atoms and having at least one oxygen atom in the form of an ether linkage and/or an ester linkage within the structure thereof, or an aromatic group which contains 6 to 11 carbon atoms and may optionally be substituted, and ~~R3 represents a hydrogen atom or an organic residue~~ R^3 represents a hydrogen atom , a straight, branched or cyclic alkyl group containing 1 to 10 carbon atoms, or an aromatic group which contains 6 to 11 carbon atoms, and may optionally be substituted, and

an unsaturated bond-containing vinyl ether represented by the following general formula (6):

R^3-CH=CH-O-R^5 (6)

~~R3-CH=CH-O-R5 (6)~~

in the formula, R^3 ~~R3~~ represents a hydrogen atom ~~or an organic residue~~, a straight, branched or cyclic alkyl group containing 1 to 10 carbon atoms, or an aromatic group which contains 6 to 11 carbon atoms and may optionally be substituted; R^5 ~~R5~~ represents an organic residue containing an unsaturated bond represented by $-CR^6=CR^7$ [[-CR6=CR7-]]; and R^6 ~~R6~~ and R^7 ~~R7~~ are the same or different and each represents a hydrogen atom or an organic residue.

9. (currently amended): A method of producing a vinyl ether group-containing (meth) acrylic ester represented by the following general formula (1):

$CH_2=CR^1$-COO-R^2-O-CH=CH-R^3 (1)

~~CH2=CR1-COO-R2-O-CH=CH-R3 (1)~~

in the formula, R^1 ~~R1~~ represents a hydrogen atom or a methyl group, ~~R2 represents an organic residue~~ R^2 represents a straight, branched or cyclic alkylene group containing 2 to 20 carbon atoms, an alkylene group containing 2 to 20 carbon atoms and having at least one oxygen atom in the form of an ether linkage and/or an ester linkage within the structure thereof, or an aromatic group which contains 6 to 11 carbon atoms and may optionally be substituted, and ~~R3 represents a hydrogen atom or an organic residue~~ R^3 represents a hydrogen atom, a straight, branched or

cyclic alkyl group containing 1 to 10 carbon atoms, or an aromatic group which contains 6 to 11 carbon atoms and may optionally be substituted,

which comprises reacting a hydroxyl group-containing vinyl ether represented by the following general formula (2):

R^3-CH=CH-O-R^2-OH (2)

~~R3-CH=CH-O-R2-OH (2)~~

in the formula, ~~R2 represents an organic residue~~ R^2 represents a straight, branched or cyclic alkylene group containing 2 to 20 carbon atoms, an alkylene group containing 2 to 20 carbon atoms and having at least one oxygen atom in the form of an ether linkage and/or an ester linkage within the structure thereof, or an aromatic group which contains 6 to 11 carbon atoms and may optionally be substituted, and ~~R3 represents a hydrogen atom or an organic residue~~ R^3 represents a hydrogen atom , a straight, branched or cyclic alkyl group containing 1 to 10 carbon atoms, or an aromatic group which contains 6 to 11 carbon atoms and may optionally be substituted,

A1 cont'd

with a (meth) acrylic ester represented by the following general formula (3):

CH_2=CR^1-COOR^4 (3)

~~CH2=CR1-COOR4 (3)~~

in the formula, R^1 ~~R1~~ represents a hydrogen atom or a methyl group and R^4 ~~R4~~ represents an organic residue,

in the presence of not more than 5% by weight of water.

10. (currently amended): A method of producing a vinyl either group-containing (meth) acrylic ester represented by the following general formula (1):

$CH_2=CR^1-COO-R^2-O-CH=CH-R^3$ (1)

~~CH2=CR1-COO-R2-O-CH=CH-R3 (1)~~

in the formula, R^1 ~~R1~~ represents a hydrogen atom or a methyl group, ~~R2 represents an organic residue~~ R^2 represents a straight, branched or cyclic alkylene group containing 2 to 20 carbon atoms, an alkylene group containing 2 to 20 carbon atoms and having at least one oxygen atom in the form of an ether linkage and/or an ester linkage within the structure thereof, or an aromatic group which contains 6 to 11 carbon atoms and may optionally be substituted, and ~~R3 represents a hydrogen atom or an organic residue~~ R^3 represents a hydrogen atom, a straight, branched or cyclic alkyl group containing 1 to 10 carbon atoms, or an aromatic group which contains 6 to 11 carbon atoms and may optionally be substituted,

which comprises reacting a hydroxyl group-containing vinyl ether represented by the following general formula (2):

A1 cont'd

$R^3-CH=CH-O-R^2-OH$ (2)

~~R3-CH=CH-O-R2-OH (2)~~

in the formula, ~~R2 represents an organic residue~~ R^2 represents a straight, branched or cyclic alkylene group containing 2 to 20 carbon atoms, an alkylene group containing 2 to 20 carbon atoms and having at least one oxygen atom in the form of an ether linkage and/or an ester linkage within the structure thereof, or an aromatic group which contains 6 to 11 carbon atoms and may optionally be substituted, and ~~R3 represents a hydrogen atom or an organic residue~~ R^3 represents a hydrogen atom, a straight, branched or cyclic alkyl group containing 1 to 10 carbon atoms, or an aromatic group which contains 6 to 11 carbon atoms, and may optionally be substituted,

with a (meth) acrylic ester represented by the following general formula (3):

$CH_2=CR^1-COOR^4$ (3)

~~CH2=CR1-COOR4 (3)~~

in the formula, R^1 ~~R1~~ represents a hydrogen atom or a methyl group and R^4 ~~R4~~ represents an organic residue,

in an atmosphere such that a molecular oxygen concentration is 0.01 to 10% by volume.

11. (currently amended): A method of producing a vinyl ether group-containing (meth) acrylic ester represented by the following general formula (1):

$CH_2=CR^1-COO-R^2-O-CH=CH-R^3$ (1)

~~CH2=CR1-COO-R2-O-CH=CH-R3 (1)~~

in the formula, R^1 ~~R1~~ represents a hydrogen atom or a methyl group, ~~R2 represents an organic residue~~ R^2 represents a straight, branched or cyclic alkylene group containing 2 to 20 carbon atoms, an alkylene group containing 2 to 20 carbon atoms and having at least one oxygen atom in the form of an ether linkage and/or an ester linkage within the structure thereof, or an aromatic group which contains 6 to 11 carbon atoms and may optionally be substituted, and ~~R3 represents a hydrogen atom or an organic residue~~ R^3 represents a hydrogen atom , a straight, branched or cyclic alkyl group containing 1 to 10 carbon atoms, or an aromatic group which contains 6 to 11 carbon atoms and may optionally be substituted,

A1 cont'd

which comprises carrying out said method of producing a vinyl ether group-containing (meth) acrylic ester in a lightproof structure.

12. (currently amended): A method of producing a vinyl ether group-containing (meth) acrylic ester as in claim 11 represented by the following general formula (1):

$CH_2=CR^1\text{-}COO\text{-}R^2\text{-}O\text{-}CH=CH\text{-}R^3$ (1)

~~CH2=CR1-COO-R2-O-CH=CH-R3 (1)~~

in the formula, R^1 ~~R1~~ represents a hydrogen atom or a methyl group, ~~R2 represents an organic residue~~ R^2 represents a straight, branched or cyclic alkylene group containing 2 to 20 carbon atoms, an alkylene group containing 2 to 20 carbon atoms and having at least one oxygen atom in the form of an ether linkage and/or an ester linkage within the structure thereof, or an aromatic group which contains 6 to 11 carbon atoms and may optionally be substituted, and ~~R3 represents a hydrogen atom or an organic residue~~ R^3 represents a hydrogen atom , a straight, branched or cyclic alkyl group containing 1 to 10 carbon atoms, or an aromatic group which contains 6 to 11 carbon atoms and may optionally be substituted,

which comprises carrying out said method of producing a vinyl ether group-containing (meth) acrylic ester in a lightproof structure in an atmosphere such that a molecular oxygen concentration in the gaseous phase within said lightproof structure is 0.01 to 15% by volume.

13. (currently amended): A method of purifying a vinyl ether group-containing (meth) acrylic ester represented by the following general formula (1):

$CH_2=CR^1\text{-}COO\text{-}R^2\text{-}O\text{-}CH=CH\text{-}R^3$ (1)

~~CH2=CR1-COO-R2-O-CH=CH-R3 (1)~~

in the formula, R^1 ~~R1~~ represents a hydrogen atom or a methyl group, ~~R2 represents an organic residue~~ R^2 represents a straight, branched or cyclic alkylene group containing 2 to 20 carbon

atoms, an alkylene group containing 2 to 20 carbon atoms and having at least one oxygen atom in the form of an ether linkage and/or an ester linkage within the structure thereof, or an aromatic group which contains 6 to 11 carbon atoms and may optionally be substituted, and ~~R3 represents a hydrogen atom or an organic residue~~ R^3 represents a hydrogen atom, a straight, branched or cyclic alkyl group containing 1 to 10 carbon atoms, or an aromatic group which contains 6 to 11 carbon atoms and may optionally be substituted,

which comprises carrying out said method of purifying a vinyl ether group-containing (meth) acrylic ester in an atmosphere such that a molecular oxygen concentration in the gaseous phase in the purification system is 0.01 to 10% by volume.

14. (currently amended): A method of purifying a vinyl ether group-containing (meth) acrylic ester represented by the following general formula (1):

$CH_2=CR^1\text{-}COO\text{-}R^2\text{-}O\text{-}CH=CH\text{-}R^3$ (1)

~~CH2=CR1-COO-R2-O-CH=CH-R3 (1)~~

in the formula, R^1 ~~R1~~ represents a hydrogen atom or a methyl group, ~~R2 represents an organic residue~~ R^2 represents a straight, branched or cyclic alkylene group containing 2 to 20 carbon atoms, an alkylene group containing 2 to 20 carbon atoms and having at least one oxygen atom in the form of an ether linkage and/or an ester linkage within the structure thereof, or an aromatic group which contains 6 to 11 carbon atoms and may optionally be substituted, and ~~R3 represents a hydrogen atom or an organic residue~~ R^3 represents a hydrogen atom , a straight, branched or cyclic alkyl group containing 1 to 10 carbon atoms, or an aromatic group which contains 6 to 11 carbon atoms and may optionally be substituted,

which comprises carrying out said method of purifying a vinyl ether group-containing (meth) acrylic ester in a lightproof structure in an atmosphere such that a molecular oxygen concentration in the gaseous phase in the purification system is 0.01 to 15% by volume.

15. (original): The method of purifying a vinyl ether group-containing (meth) acrylic ester according to Claim 13,

wherein said purification of a vinyl ether group-containing (meth) acrylic esters is carried out in the manner of distillation purification.

16. (currently amended): A method of producing the vinyl ether group-containing (meth) acrylic ester composition according to Claim 2,

which comprises causing a radical polymerization inhibitor, or both of a radical polymerization inhibitor and a basic compound to coexist with a vinyl ether group-containing (meth) acrylic ester represented by the following general formula (1):

$CH_2=CR^1\text{-}COO\text{-}R^2\text{-}O\text{-}CH=CH\text{-}R^3$ (1)

~~CH2=CR1-COO-R2-O-CH=CH-R3 (1)~~

in the formula, R^1 ~~R1~~ represents a hydrogen atom or a methyl group, ~~R2 represents an organic residue~~ R^2 represents a straight, branched or cyclic alkylene group containing 2 to 20 carbon atoms, an alkylene group containing 2 to 20 carbon atoms and having at least one oxygen atom in the form of an ether linkage and/or an ester linkage within the structure thereof, or an aromatic group which contains 6 to 11 carbon atoms and may optionally be substituted, and ~~R3 represents a hydrogen atom or an organic residue~~ R^3 represents a hydrogen atom , a straight, branched or

cyclic alkyl group containing 1 to 10 carbon atoms, or an aromatic group which contains 6 to 11 carbon atoms and may optionally be substituted.

17. (original): The method of purifying a vinyl ether group-containing (meth) acrylic ester according to Claim 14,

wherein said purification of a vinyl ether group-containing (meth) acrylic esters is carried out in the manner of distillation purification.

18. (new) : The vinyl ether group-containing (meth) acrylic ester composition according to Claim 1,

wherein said radical polymerization inhibitor is selected from the group consisting of quinone polymerization inhibitors, amine polymerization inhibitors, copper dithiocarbamate polymerization inhibitors and N-oxyl polymerization inhibitors.

A1 cont'd

19. (new): The vinyl ether group-containing (meth) acrylic ester composition according to Claim 2,

wherein said basic compound is selected from the group consisting of alkali metal hydroxides, alkaline earth metal hydoxides and amines.

20. (new): The vinyl ether group-containing (meth) acrylic ester composition according to Claim 1,

wherein a level of addition of the radical polymerization inhibitor is not less than 0.00001% by weight but not more than 5% by weight relative to the vinyl ether group-containing (meth) acrylic ester.

21. (new): The vinyl ether group-containing (meth) acrylic ester composition according to Claim 2,

wherein a level of addition of the basic compound is not less than 0.00001% by weight but not more than 5% by weight relative to the vinyl ether group-containing (meth) acrylic ester.